As there may be a lingering idea that the "runs" of these birds have some connection with nesting, it may be well to state that this is altogether a mistake. The nests, of which beautiful examples are figured by Mr. Campbell, present indeed no special features, being built at a height of from ten to fifteen feet above the ground, and usually containing at the proper season two, or sometimes three, eggs. These latter, however, cannot fail to attract the collector by their porcelain-like polish and beautifully pencilled markings. Thanks to the energy of Australian ornithologists, the nests and eggs of most of the species are now known, although some are rare and difficult to find.

"Run" of Great Bower-Bird. From a photograph taken in Western Australia by Mr. H. H. Johnston. (From the *Proceedings* of the Royal Physical Society of Edinburgh.)

Among the more elaborate types of "runs" or "bowers," the author figures those of the Satin Bower-Bird, the Spotted Bower-Bird, the Great Bower-Bird, the Queensland Bower-Bird, and the Regent Bird; the third of these being herewith reproduced. The photographs confirm previous statements as to the two types of decoration employed in these bowers, the taste of the Satin Bower-Bird displaying itself in the selection of bright coloured parrot-feathers, while the other species named prefer bones and shells. The Spotted Bower-Bird may be described as a collector of sheep's bones (especially the vertebræ), whereas the Great Bower-Bird accumulates bleached shells. As is the case with the "Viscacherias" of the Argentine Pampas, in a Bower-Bird haunted country it is well to search the "runs" for any glittering objects, such as money or jewellery, which may have been lost in the neighbourhood. The amount of grass and sticks employed in some of these "bowers" is enormous, one structure being described as ranging from four to six feet in height.

In one respect Mr. Campbell does not agree with some writers, who have stated that the Cat-Birds (*Aeluroedus*) differ from other members of the group in that they build no bower, but content themselves with clearing a space of ground. No such spaces have, however, according to our author, yet been observed; and it is suggested that the birds may merely play on some fallen log. On the other hand, the Tooth-billed Cat-Bird (*Scoenopaeus*) of North Queensland does undoubtedly clear such spaces, upon which are laid at intervals a few leaves of one particular kind of tree. This represents the simplest type of "run," the most complex being that of the Gardener-Bird (*Amblyornis*) of New Guinea, which builds an orchid-covered hut, with a mossy lawn in front, ornamented with brilliant flowers and berries.

As to the object of these strange structures, Mr. Campbell has no new suggestion to offer, and we may therefore conclude that he accepts the old "playground theory." R. L.

THE COSMIC ORIGIN OF MOLDAVITE.

MUCH attention has recently been devoted by Austrian and Bohemian geologists to the solution of an interesting question, that of the origin of those peculiar glassy bodies which are known collectively as moldavite or bouteillenstein. It has been considered by some authors that these fragments are to be looked upon as representing the relics of prehistoric glass-manufacture; but, as recently noted in the columns of NATURE, Herr J. Bareš has lately brought forward experimental proofs to refute the theory of the artificial origin of moldavite glass. Additional stimulus has been given to the study of this problem by the recent enunciation of a

new theory. Dr. F. E. Suess has expressed the opinion that these glassy fragments bear strong analogy to meteorites, and that they are in reality, like the latter, aerolites. In support of this view, in addition to other arguments, he lays special stress on the nature of the peculiar, though varying, surface sculpture of bouteillenstein, a sculpture not consistent with any theory of mechanical transport in water. Prof. Rzehak, however, has opposed this hypothesis of a cosmic origin, and brings forward arguments for its refutation. This author rather inclines towards the theory of an artificial origin; but Bareš, by experiments above referred to, applied a process of elimination to the various theories put forward for the terrestrial origin of the glass, and finally considered that of Dr. Suess to be most probably the correct one. A recent contribution to the literature of this subject is a short paper brought before the Böhmische Kaiser Franz-Josefs Akademie (Prague) by J. N. Woldrich last December. An abstract of this appears in the *Bulletin International* (dated 1898) issued by the Academy, and from the photographs illustrating that paper the accompanying figures have been selected for reproduction.

FIG. 4.

FIG. 8*a*.

FIG. 6.

Herr Woldřich describes the surface markings of specimens in his own large collection, and points out the resemblance between certain of these Bohemian examples and the peculiar obsidian-bombs from Australia, described by Stelzner. Some of the Bohemian occurrences show, in fact, a hollow, bomb-like form. A fragment of such a specimen is represented in Fig. 8*a*. Figs. 4 and 6, photographed in natural size, show two characteristic types of sculpture, Fig. 4 exhibiting "finger impressions," and Fig. 6 a network of furrows, having in part a rough radial arrangement. The moldavite found both in northern and southern Bohemia occurs in sandy deposits which are regarded as belonging to either late Tertiary or early Diluvial time. Herr Woldřich considers that the known facts relating to moldavite and its distribution speak in favour of its extra-terrestrial origin, but that it is only known to occur in sandy deposits, whether in Europe or on other parts of the earth's surface, he regards as a striking circumstance.

NOTES.

AT a meeting of the Glasgow University Court held on the 13th inst., Principal Story presiding, a petition for leave to retire from the chair of Natural Philosophy was presented from Lord Kelvin. The Court granted the leave asked, and accepted Lord Kelvin's resignation with deep regret. A remit was made to the Principal to prepare a minute to be signed by all the members of the Court, expressing their sense of the great loss that the University is now to sustain. Lord Kelvin has occupied the chair for fifty-three years.

DR. P. F. RAYMOND, the successor of Prof. Charcot in the chair of Nervous Diseases at the Saltpêtrière, has been elected a member of the Paris Academy of Medicine.

PROF. KLEIN proposes to spend two or three weeks in this country, so that, after the work of the Catalogue Conference is finished, he can have an opportunity of discussing, with our mathematicians and physicists, the plan and scope of the second part of the *Encyklopädie der Mathematischen Wissenschaften*, which deals with Applied Mathematics. The season for his visit is in some respects unfortunate, as being a holiday time; on the other hand, there is the advantage that those who are to be found at home will have plenty of leisure to devote to the discussion of the details of this great work.

THE death is announced, at the age of eighty-seven years, of the Right Rev. Charles Graves, Lord Bishop of Limerick, who in 1843 was appointed Erasmus Smith professor of pure mathematics at Trinity College, Dublin. His published work appeared for the most part in *Crelle's Mathematical Journal*, and many of his theorems are to be found in text-books on geometry. In 1841 he edited a translation, with considerable additions, of Chasles' "Memoirs on Cones and Spherical Conics." He was elected President of the Royal Irish Academy in 1861, and a Fellow of the Royal Society in 1880.

THE death is announced in the *Athenaeum* of Dr. Eugen Ritter von Lommel, Rector of the University and a member of the Academy of Sciences of Munich. He was the author of several works, including "Das Wesen des Lichts," "Wind und Wetter," and "Lexikon der Physik und Meteorologie."

THE negotiations which for some time past have been carried on between the Royal Geographical Society and the University of Oxford with a view to the establishment at Oxford of a fully-equipped school or institute of geography, for the use, not only of Oxford graduates and undergraduates, but of others who desire to avail themselves of such an opportunity, have come to a satisfactory conclusion, and the school will begin operations in October next, under the direction of Mr. H. J. Mackinder. The Royal Geographical Society is to contribute 400*l.* annually for five years out of the 800*l.* required, and the school will be under the supervision of a joint committee of representatives of the Society and the University. At a recent meeting of the committee, the staff was appointed, Mr. Mackinder being the head of the school, and dealing specially with historical geography; Mr. A. J. Herbertson has been appointed assistant to the Reader, and will deal with physical geography, cartography, and surveying; Mr. H. N. Dickson has been appointed Lecturer on Physical Geography; and Mr. G. B. Grundy will in 1899–1900 lecture on ancient geography. The work of the school will include a course of systematic instruction primarily intended for graduates and other advanced students, with classes, demonstrations, and practical work in physical geography, cartography, and surveying. Courses of lectures will also be given with special reference to the historical and scientific teaching of the University The work will be carried on for five days each week during term. The lecture-room and laboratory will be in the Old Ashmolean